



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Helmut FITZ et al.

Serial No. 10/038,910

Filed January 8, 2002

: Confirmation No. 1343

: Docket No. 2002-0004A

: Group Art Unit 3683

: Examiner Devon C. Kramer

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BRAKING- AND DAMPING DEVICE, IN
PARTICULAR FOR MOVABLE PIECES OF
FURNITURE

REQUEST FOR REINSTATEMENT OF APPEAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to Appellants' Brief on Appeal filed February 12, 2004, the Office, on April 2, 2004, issued a non-final Office Action. This Office Action included the withdrawal of claims 32 and 44 from consideration and the rejection of claims 22, 33-35, 42-43, 45 and 47-50.

In response thereto, in accordance with 37 CFR 1.193(b)(2), Appellants request reinstatement of the Appeal. A Supplemental Appeal Brief accompanies this Request. Fees for the Notice of Appeal and Appeal Brief have already been paid and are requested to be applied to this Appeal.

Respectfully submitted,

Helmut FITZ et al.

By:


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TO CHARGE ANY DEFICIENCY IN THE
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ACCOUNT NO. 23-0975

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FURNITURE

SUPPLEMENTAL BRIEF ON APPEAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellants hereby present their Supplemental Brief on Appeal pursuant to the accompanying Request for Reinstatement of Appeal. The fee set forth in 37 CFR 1.17(c) has been previously submitted.

REAL PARTY IN INTEREST

For this information please refer to the corresponding section in the Brief on Appeal filed February 12, 2004.

RELATED APPEALS AND INTERFERENCES

For this information please refer to the corresponding section in the Brief on Appeal filed February 12, 2004.

STATUS OF CLAIMS

Claims 1-21 are canceled.

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Claims 22-50 are pending.

Appeal is taken of the rejection of claims 22, 33-35, 42-43, 45, and 47-50. Claims 23-31 and 37-41, and now claims 32 and 44 have been withdrawn from consideration. Claims 36 and 46 have been indicated by the Examiner as containing allowable subject matter.

STATUS OF AMENDMENTS

The Amendment filed at the same time as the Brief submitted February 12, 2004 has been entered.

SUMMARY OF THE INVENTION

Please refer to the Brief on Appeal submitted February 12, 2004 for the Summary of the Invention.

ISSUES

A first issue in this Appeal is whether the cited U.S. patent to Smalley, directed to a hitch for use in towing vehicles, properly anticipates each of claims 22, 33-35, 43, 45 and 47-50 as alleged by the Examiner in section 5 beginning on page 3 of the April 2, 2004 Office Action.

A second issue is whether claims 22, 33-35, 43, 45 and 47-50 are properly rejected by the Examiner as being anticipated by Corcoran et al., U.S. Patent 5,257,680 (Corcoran).

A third issue is whether claims 22, 33-35, 43, 45 and 47-50 were properly rejected by the Examiner as being anticipated by Beyene et al., U.S. Patent 6,443,437 (Beyene).

A further issue is whether claim 42 is properly rejected by the Examiner as being unpatentable over Smalley, Corcoran or Beyene in further view of Muller, U.S. Patent Application 2002/0066629 (Muller).

GROUPING OF CLAIMS

The claims in each group of claims rejected by the Examiner do not stand or fall together. Claims 22 and 32 are separately argued. Claims 34, 35, 42, 43, 45, 47, 48 and 49 are all also separately argued.

ARGUMENT

Claims 22, 33-35, 43, 45 and 47-50 are not Anticipated by Smalley

The rejections of each of the claims discussed as being argued separately in the grouping of the claims are discussed below under separate headings. As the U.S. patent to Smalley applies to each of these discussions, a discussion of this patent and its disclosure is appropriate before beginning a direct comparison between the individual claims and Smalley.

The Smalley Patent

The Smalley patent is directed to a hitch that is used in towing vehicles. As described in the objects of the invention, the hitch is a drawbar hitch that is primarily used with farm or similar vehicles where heavy trailers and similar vehicles are to be towed by a tractor or truck. The primary purpose is to reduce or eliminate ordinary damage caused by towing due to sudden starts and stops.

The hitch is designated by reference number 3 and includes a rectangular base or mounting member 4 enabling the hitch to be bolted to a bumper 2. Note Fig. 1 and Fig. 2.

A tubular housing 6 is positioned on the base 4 by welding. A load transfer element 10 extends transversely across the tubular housing 6, is of washer-like construction and fastened by welding about its periphery to the interior of the housing 6 as described at the top of column 2.

A rod-like member serves as an adjusting part 12 and is fastened at one end to a connector 13 by welding at 15, and at the other end to a nut 17.

So-called restricting means 18 and 19a, in the form of washer-like parts similar to the load transfer element 10, are provided. The part 19a is fastened to the connector 13 by welding and the restricting means 18 is free to be moved under the action of the nut 17.

A pair of bushings 21 and 22 formed of polyurethane, such as neothane from Goodyear Tire and Rubber Company, which are substantially identical, are arranged in complimentary manner on either side of the load transfer element 10. As shown in Fig. 2 the bushings are not under compression. They could be placed under compression as shown by Fig. 4 by tightening the nut 17, as illustrated. Note column 2, lines 43-58. As discussed in the last paragraph of column 2, a drawbar pull of 1,000 lbs deflects the assembly as suggested possibly in Fig. 5. That is, the bushing 21 is depressed between restricting means 18 and load transfer element 10, which transfers the load from the connector 13 through the part 12 and nut 17 to the restricting means 18, and then from the bushing 21 to the load transfer element 10, the tube 6 and then the truck itself. As described at the top of column 3, with this deflection the bushing has substantially filled and is in complete engagement with the interior of the tubular housing 6. The bushing 22 is in what may be termed a completely relaxed condition.

Claim 22 is not Anticipated by Smalley

Claim 22 requires a braking and damping device that includes a fluid cylinder having a cylinder wall. The claim further requires two pistons that are arranged so as to be linearly displaceable in the fluid cylinder. The claim further requires a piston rod for displacing one of the two pistons in the fluid cylinder. An elastically deformable sealing member, furthermore, is recited as being arranged between the two pistons such that when damping occurs by the piston rod displacing the one of the two pistons in the fluid cylinder, the elastically deformable sealing member is squeezed between the two pistons and pressed against the cylinder wall.

In order for Smalley to anticipate claim 22, each and every element as set forth in claim 22 must be found, either expressly or inherently, described in the Smalley patent. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP §2131. With respect to claim 22, Smalley does not include a fluid cylinder, does not include two pistons, does not include a sealing member, and particularly does not include a sealing member arranged between the two pistons so that when damping occurs by the piston rod displacing the

one of the two pistons in the fluid cylinder, the elastically deformable sealing member is squeezed between the two pistons and pressed against the cylinder wall.

In the Office Action, the Examiner takes the position that Smalley provides a device having a fluid cylinder. However, there is no fluid cylinder in Smalley. Element number 6 is simply a tubular housing 6, and not a fluid cylinder.

While the Examiner is required to give the claims their broadest reasonable interpretation, that interpretation must, as stated, be reasonable. The broadest reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999). MPEP §2111. As noted, the claims must be interpreted as broadly as their terms reasonably allow. This means that the words of the claim must be given their plain meaning unless Appellant has provided a clear definition in the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); *MSM Investments Co. v. Carolwood Corp.*, 259 F.3d 1335, 1339-40, 59 USPQ2d 1856, 1859-60 (Fed. Cir. 2001). MPEP §2111.01. Furthermore, the plain meaning refers to the meaning that is given to the term by those of ordinary skill in the art. *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001).

With the above in mind, it is respectfully submitted that the Examiner cannot interpret the tubular housing 6 of Smalley as a fluid cylinder. A fluid cylinder, to one of ordinary skill in the art, is a cylindrical body or space that forms a chamber in which a piston or similar element can work on a fluid. To accept the Examiner's interpretation means that any cylindrical body that exists outside of a vacuum is a fluid cylinder. In other words, it ignores the modifier "fluid" with respect to the cylinder and the meaning that this connection of the two terms gives to those of ordinary skill in the art.

This is even more so the case with respect to the terms "piston," which pistons are recited as being arranged to be linearly displaceable in the fluid cylinder. In its most common definition, cited from Merriam-Webster Online (<http://www.m-w.com>), the word "piston" means "a sliding piece moved by or moving against fluid pressure which usually consists of a short cylinder fitting within a cylindrical vessel along which it moves back and forth." From the above discussion of

Smalley, it is clear that neither elements 18 nor 19a nor the load transfer element 10 is a piston. None of these act against fluid pressure. Elements 18 and 19a are washers that sandwich the bushings 21 and 22 therebetween as part of the hitch. They are not moved by and do not move against fluid pressure, and are thus not pistons. This is even more so the case with element 10. Element 10 does not move relative to tubular housing 6, but is welded thereto, as discussed above. Thus, under the plain and ordinary meaning of the word "piston", none of elements 18, 19a or 10 are a piston. One of ordinary skill in the art would not read or interpret either of the washers 18 or 19a or the element 10 as a piston as that term is ordinarily used by those of ordinary skill in the mechanical arts. Interpreting these elements as a piston is thus submitted to quite clearly be unreasonable.

The Examiner cites Smalley as having an elastically deformable sealing member 21. However, it is not a sealing member, as it does not have any function of sealing. Its function is simply as a damping member during towing.

Furthermore, the bushing 21 is not arranged between the two pistons such that when damping occurs by the piston rod displacing the one of the two pistons in the fluid cylinder, the elastically deformable sealing member is squeezed between the two pistons and pressed against the cylinder wall. As noted above, the members 18, 19a and 10 are not pistons. But even if, for example, member 18 of Smalley is considered a piston, because it moves, bushing 21 would then be squeezed between washer 18 and fixed element 10. Even if, for purposes of argument, this interpretation were adopted, the elastically deformable sealing member of the bushing 21 would not be squeezed between two pistons, but between a fixed wall of the "cylinder" and the "piston."

In a previous response to Appellants' arguments, the Examiner argued that the members of Smalley can be read as pistons because they move within a cylinder and are attached to a rod. However, as discussed above, the members 18 and 19a are not moved by or moved against fluid pressure, and thus would not be considered to be a piston by those of ordinary skill in the art. In other words, they would not be considered pistons under the plain meaning of the term. Indeed, it is clear from the operation that this is not their function. Further, even if such members 18 and 19a were considered to be pistons, element 10 is not a member that moves within a cylinder. Nor

is it attached to rod 12. As such, this element is even more remote from the possibility of being considered a piston. For this reason alone the claim language of claim 22 distinguishes over Smalley.

Claim 34 Further Distinguishes over Smalley

Claim 34 is dependent from claim 22. This claim further recites that a second of the two pistons comprises a seal which seals with the cylinder wall of the cylinder. To address this limitation the Examiner simply states that Smalley provides a piston that is opposite to the piston with the piston rod as provided with a seal that seals the cylinder wall. However, assuming for purposes of argument that washer 18 is a first piston and element 19a is a second piston, then the "elastically deformable sealing member" 21 is not squeezed between the two pistons, but between washer 18 and fixed element 10. If the second piston is considered the fixed element 10, this second of the two pistons does not itself have a seal. If bushing member 22 is considered the seal required by claim 34, this is respectfully submitted to be an improper interpretation. Element number 22 is a bushing provided for the purpose of damping, and is not provided to seal tubular housing 26.

Claim 35 Further Distinguishes over Smalley

Claim 35 requires the sealing member (the elastically deformable sealing member recited in claim 22) to comprise a solid body made of a rubber elastic material that connects the two pistons. If washer 18 and washer 19a are considered the two pistons, then Smalley has no solid body made of a rubber elastic material that connects the two pistons.

Independent Claim 42 Further Distinguishes over Smalley

Independent claim 42 includes all of the same limitations as independent claim 22. Accordingly, claim 42 distinguishes over Smalley for the same reasons as are applicable with respect to claim 22.

Claim 42, however, further recites in the preamble that the braking and damping device is for a piece of furniture. Claim 42 further recites "said fluid cylinder being mounted on the piece of furniture." Claim 42 further recites "said piston rod being positioned so as to be engageable by a movable part of the piece of furniture." In other words, claim 42 recites the environment of a piece of furniture for the braking and damping device.

The Examiner addresses claim 42 by stating that "Smalley . . . are capable of being used on movable pieces of furniture." The Examiner then goes on to cite Muller as teaching a damper device used on movable pieces of furniture and concludes that it would have been obvious to provide the device of Smalley on a movable piece of furniture as taught by Muller to provide a means to damp extreme forces which may occur from a door or cabinet closing. This position by the Examiner is respectfully submitted to be both legally and factually incorrect.

Smalley provides a hitch for towing a vehicle. Whether or not it might be capable to put Smalley on a piece of furniture does not provide any motivation or suggestion to one of ordinary skill in the art to do so. It does not, further, address the issue of analogous prior art.

First, it is respectfully submitted that the patent to Smalley is not analogous prior art which may be used in a 103 combination rejection against the claims of the present application. The patent is directed to a hitch, and thus it is clearly not in the field of the present invention. Nor is it in a field which relates to particular problems which the present inventors were addressing in providing a braking and damping device for a movable piece of furniture. Thus, as a primary point, the Examiner is not permitted to consider Smalley in a combination rejection.

Further, there is no suggestion anywhere in either reference to make the combination proposed by the Examiner. Even if one accepts that Muller is directed toward a damping device for a piece of furniture, this does not provide any motivation for one of ordinary skill in the art to attempt a combination of the towing hitch of Smalley. It seems abundantly clear that the problems of addressing the towing of vehicles with a drawbar pull of 1,000 lbs. are vastly different than those which relate to drawer slides and furniture hardware. Thus it is respectfully submitted that the Examiner's combination rejection is completely improper and must be reversed.

Claim 43 Further Distinguishes over Smalley

Claim 43 recites similar limitations to those of claim 22, and is considered to distinguish over Smalley for the same reasons as are applicable with respect to claim 22. However, the claim modifies some of the limitations to even further distinguish over Smalley.

Claim 43 recites that the second piston is disposed opposite to the first piston and has a seal sealing the second piston with respect to the cylinder wall. Thus claim 43 further distinguishes over Smalley for the same reasons as were discussed above with respect to claim 34.

Claim 43 further recites the elastically deformable member as an elastically deformable friction braking member that is arranged between a first piston and a second piston so that when the damping occurs by the piston rod displacing the first piston in the fluid cylinder, the elastically deformable friction braking member is deformed by being squeezed between the first piston and the second piston and pressed against the cylinder wall so as to cause damping caused by friction in addition to damping caused by fluid damping. Accordingly, in addition to the reasons as were discussed above with respect to claim 22, the structure of an elastically deformable friction braking member as recited in claim 43 is not found in Smalley. Smalley has no disclosure or suggestion of any structure causing the squeezing of an elastically deformable friction braking member between first and second pistons to press the member against the cylinder wall so as to cause damping caused by friction in addition to damping caused by fluid damping.

Claim 45 Further Distinguishes over Smalley

Claim 45 depends from claim 43, and thus distinguishes over Smalley for the same reasons as are applicable with respect to claim 43. However, the claim also recites that the friction braking member is in the form of a solid body manufactured from a rubber elastic material which connects the first piston and the second piston. Thus, this claim further distinguishes over Smalley for the reasons as are applicable with respect to claim 35.

Claims 47 and 48 Further Distinguishes over Smalley

Claims 47 and 48 recite that the cylinder is structured and arranged so as to employ a pneumatic medium or air as the operating fluid. Because the tubular housing 6 of Smalley is not a fluid cylinder, it is not so structured and arranged. As such, these claims even further distinguish over Smalley.

Claim 49 Further Distinguishes over Smalley

Claim 49 further requires that the friction braking member be a single body the material of which is squeezed between the first piston and the second piston. Smalley does not squeeze a single body between a first piston and a second piston, however. As such, this claim even further distinguishes over Smalley.

Claim 22 is not Anticipated by Corcoran

The Examiner interprets Corcoran by referring to two pistons 22. Corcoran is directed to surface effect dampers having both hysteresis and a frictional component. Generally speaking, the piston in Corcoran is referenced by reference number 12, and is mounted upon a piston rod 20 for movement within and relative to a housing 30. The piston 12, in the first embodiment, for example, is made up of a molded elastomeric sleeve 14. However, reference numbers 22 are flat retaining washers 22. Note column 3, lines 15-18. Thus, as a first point, the Examiner's rejection fails for not having two pistons arranged so as to be linearly displaceable in a fluid cylinder. There is only a single piston discussed by Corcoran. Elements number 22 are not pistons, but are washers. They may not be considered pistons, for reasons similar to those as discussed above. That is, they are not pistons within the meaning of that term as would be understood by one of ordinary skill in the art. It is the device as a whole that forms a piston, and not each separate washer 22.

Claim 22 further requires an elastically deformable sealing member between the two pistons so that when damping occurs by the piston rod displacing the one of the two pistons in the fluid cylinder, the elastically deformable sealing member is squeezed between the two pistons and

pressed against the cylinder wall. The Examiner refers to element 14. However, element 14 forms part of the piston 12 itself. It is not a separate sealing member that is squeezed between two pistons. It is only located between two washers 22, and not between two pistons.

Claim 34 Further Distinguishes over Corcoran

Claim 34 requires that a second of the two pistons comprise a seal which seals with the cylinder wall of the cylinder. This is of course not the same seal as the elastically deformable sealing member. However, the Examiner refers to that same seal 14. Thus the Examiner has recited a single element to try to correspond to two separately recited elements. Thus the Examiner's rejection clearly fails. It is clear that the washers 22 do not have separate seals sealing with the cylinder wall of the cylinder.

Claim 42 Distinguishes over the Combination of Corcoran and Muller

The Examiner also combines Corcoran with Muller to attempt to reject claim 42. Again, there is no motivation to one of ordinary skill in the art to make any such combination. It can be seen from the Examiner's rejection that the Examiner has, in fact, not identified any such motivation. The Examiner's statement that Corcoran is capable of being used on a movable piece of furniture is without support. The Examiner's conclusion that it would have been obvious to combine Corcoran with Muller is also without any support in either reference. No motivation or reason to attempt any such combination has been referenced by the Examiner, and indeed none may be seen. It may be seen that the Examiner has in fact failed to present a *prima facie* case of obviousness.

Further, while Corcoran seems directed in general to surface effect dampers having both hysteresis and frictional components, the intended point of use discussed in Corcoran are identified as, for example, a motor mount that allows a combination of torsional rotation of an engine and as a helicopter strut damper. There is no reason whatsoever why one of ordinary skill in the art would attempt a combination for the damper for a piece of furniture.

Claim 43 Further Distinguishes over Corcoran

Claim 43 recites similar limitations to those of claim 22, and distinguishes over Corcoran for the same reasons as are applicable with respect to claim 22. However, the claim modifies some of the limitation so as even further distinguish over Corcoran.

Claim 43 recites that the second piston is disposed opposite to the first piston and has a seal sealing the second piston with respect to the cylinder wall. Thus claim 43 further distinguishes over Corcoran for the same reasons as were discussed above with respect to claim 34.

Claim 22 is not Anticipated by Beyene

In applying Beyene to claim 22, the Examiner alleges that the device is a fluid cylinder in which two pistons, 26 and 60, are arranged in a linearly displaceable manner. The Examiner further refers to elastically deformable sealing member 50a.

It is first noted that the Examiner does not identify the element that is considered to be the fluid cylinder. However, in looking at Beyene, it seems clear that the fluid cylinder must be considered, if present at all, to be bottom tube 32. Element number 26 referenced by the Examiner is considered by Beyene to be a top end plate 26, connected to what is referred to as the top tube 22. It is thus clear that tube 22 could not be considered a fluid cylinder, because then element number 26, considered to be one of the two pistons, would not be linearly displaceable in the fluid cylinder, as end plate 26 is fixed with respect to tube 22.

Given the above, Beyene fails to disclose or suggest an elastically deformable sealing member that is arranged between the two pistons so that when damping occurs by the piston rod displacing the one of the two pistons in the fluid cylinder, the elastically deformable sealing member is squeezed between the two pistons and pressed against the cylinder wall. If the sealing member is considered to be element 50a, in accordance with the position taken by the Examiner, then the sealing member is squeezed between piston 60 and piston 26. However, it is not pressed against the wall of the cylinder when this occurs. It is pressed against tube 22, fixed with respect to piston 26. For this reason, Beyene does not anticipate claim 22.

Claim 34 Further Distinguishes over Beyene

The Examiner references the deformable sealing member 50a as being the seal referenced in claim 34. For the same reason as discussed above, the seal 50a is not an additional seal for the second of the two pistons, and it does not seal with the cylinder wall of the cylinder, but contacts the inside of tube 22.

Claim 42 Distinguishes over Beyene and Muller

Claim 42 distinguishes over Beyene for the same reasons as discussed above. Further, there is no motivation or suggestion to one of ordinary skill in the art to combine Beyene with Muller.

Beyene discloses a suspension strut for vehicles. This is not an art that is analogous to dampers for drawers and other furniture. Thus, for this reason alone, Beyene may not be considered in a 103 rejection.

Further, the Examiner has referred to no motivation or suggestion from any reference that would suggest to one of ordinary skill in the art to combine a vehicle strut in a drawer damping assembly. As such, the Examiner has failed to present a *prima facie* case of obviousness. Thus the same failings with respect this combination as were discussed with respect to Smalley and Corcoran are applicable with respect to Beyene.

Claim 43 Further Distinguishes over Beyene

Claim 43 distinguishes over Beyene for the same reasons as were applicable with respect to claim 22. Furthermore, the claim requires that the elastically deformable frictional braking member be deformed by being squeezed between the first and second pistons and pressed against the cylinder walls so as to cause damping caused by friction in addition to damping caused by fluid damping. There is no indication that such damping would take place with the device of Beyene.

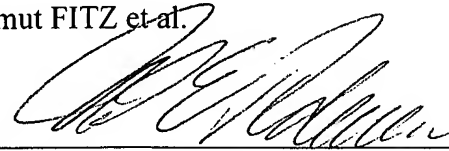
CONCLUSION

In view of the above it is respectfully submitted to be clear that the Examiner's rejection of claims 22, 33-35, 42-43, 45 and 47-50 must be withdrawn. Accordingly, reversal of all rejections is requested.

Respectfully submitted,

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APPENDIX

Claim 22 A braking and damping device, comprising:

 a fluid cylinder having a cylinder wall;
 two pistons that are arranged so as to be linearly displaceable in said fluid cylinder;
 a piston rod for displacing one of said two pistons in said fluid cylinder; and
 an elastically deformable sealing member arranged between said two pistons such that when damping occurs by said piston rod displacing the one of said two pistons in said fluid cylinder, said elastically deformable sealing member is squeezed between said two pistons and pressed against said cylinder wall.

Claim 33 The braking and damping device of claim 32, wherein the pneumatic medium is air.

Claim 34 The braking and damping device of claim 22, wherein a second of said two pistons comprises a seal which seals with said cylinder wall of said cylinder.

Claim 35 The braking and damping device of claim 22, wherein said sealing member comprises a solid body made of a rubber elastic material that connects said two pistons.

Claim 42 A braking and damping device for a piece of furniture, comprising:

 a fluid cylinder having a cylinder wall, said fluid cylinder being mounted on the piece of furniture;
 two pistons that are arranged so as to be linearly displaceable in said fluid cylinder;
 a piston rod for displacing one of said two pistons in said fluid cylinder, said piston rod being positioned so as to be engageable by a movable part of the piece of furniture; and
 an elastically deformable sealing member arranged between said two pistons such that when damping occurs by said piston rod displacing the one of said two pistons in said fluid cylinder, said elastically deformable sealing member is squeezed between said two pistons and pressed against said cylinder wall.

Claim 43 A braking and damping device, comprising:

 a fluid cylinder having a cylinder wall;

 a first piston and a second piston that are arranged so as to be linearly displaceable in said fluid cylinder along an axis;

 a piston rod for displacing said first piston in said fluid cylinder;

 wherein said second piston is disposed opposite to said first piston and has a seal sealing said second piston with respect to said cylinder wall;

 an elastically deformable friction braking member arranged between said first piston and said second piston such that when damping occurs by said piston rod displacing said first piston in said fluid cylinder, said elastically deformable friction braking member is deformed by being squeezed between said first piston and said second piston and pressed against said cylinder wall so as to cause damping caused by friction in addition to damping caused by fluid damping.

Claim 45 The braking and damping device of claim 43, wherein said friction braking member is in the form of a solid body manufactured from a rubber elastic material which connects said first piston and said second piston.

Claim 47 The braking and damping device of claim 43, wherein said cylinder is structured and arranged to employ a pneumatic medium as an operating fluid.

Claim 48 The braking and damping device of claim 43, wherein said cylinder is structured and arranged to employ air as the operating fluid.

Claim 49 The braking and damping device of claim 43, wherein said friction braking member is a single body, the material of which is squeezed between said first piston and said second piston.

Claim 50 The braking and damping device of claim 43, wherein said first piston and said second piston are made of a rigid material.